CONTENTS

Volume 11, Issue Nos 1–4

International Journal of
ENERGY RESEARCH

Issue No. 1 JANUARY–MARCH

The Passive Solar Heated School in Wallasey. V: Energy Requirements for a Passive School Building: M. G. Davies 1

Heat Pump Assisted Distillation. IV: An Experimental Comparison of R114 and R11 as the Working Fluid in an External Heat Pump: S. Supranto, R. Jaganathan, S. Dodda, P. J. Diggory and F. A. Holland 21

Thermal Performance of Plastic Film Solar Air and Water Heaters: N. K. Bansal, A. Mumar and S. P. Singh 35

Medium Term Market Perspectives, Goal Prices and Competitiveness of Renewable Resources in the Italian Energy System: U. Amato, G. Amodeo, V. Brandi, V. Cuomo, D. Ruggi, C. Serio, V. Silvestrini and G. C. Tosato 45

Prediction of some Performance Characteristics of Shale Oil in the Gas Turbine Combustor: Y. S. H. Najjar 69

A Decision Support System for Technologies of Rural Electrification: N. J. D. Lucas and D. B. Yu 77

Economic Analysis of Heat Storage in Energy Systems: J. P. Forsström, P. D. Lund and J. T. Routti 85

A Mathematical Model for a Deep-bed Grain Drying System: M. S. Sodha and A. Kumar 95

Power system Interconnection in Developing Countries and the Equilibrium of Marginal Costs: N. J. D. Lucas and S. Bin Sairan 113

A Comparative Study of an Absorber Heat Recovery Cycle for Solar Refrigeration using NH3-Refrigerant with Liquid/Solid Absorbents: S. C. Kaushik and R. Kumar 123

SHORT COMMUNICATIONS

Charcoal made in the Pit–Tumulus Type of Earth–Kiln: M. Vahrman 133

Water-Heaters in Series: J. M. Minguez 145

Performance of Tubeless Flat-plate Solar Collector: A. Tamimi 153

Issue No. 2 APRIL–JUNE

The Passive Solar Heated School in Wallasey. VI: Thermal Sensation and Comfort in the Classroom: A Year-Long Study of the Subjective and Adaptive Responses of Children: A. D. M. Davies and M. G. Davies 157

Heat Pump Assisted Distillation. V: A Feasibility Study on Absorption Heat Pump Assisted Distillation Systems: M. A. R. Eisa, R. Best, P. J. Diggory and F. A. Holland 179

Indexed or abstracted by 'Current Contents' and other leading Indexing/Abstracting Services.

Experimental Study on the Use of Thermal Insulation in Buildings to Conserve Air-Conditioning Energy: S. M. A. Ibrahim 193

Detonation-Induced Coal Gasification: T. H. Pierce 203

Computer Simulation Studies of a Double Effect Generation Absorption Air-Conditioning System Using Water–Salt and Alcohol–Salt Mixtures: S. C. Kaushik, S. M. Bin Gandhi, R. S. Agarwal and S. Chandra 233

Cumulative Energy Consumption and Cumulative Degree of Perfection of Chemical Processes: J. Szargut and D. Morris 245

An Energy Storing Absorption Heat Pump Process: S. Lourdudoss and H. Stymne . . 263

A Technoeconomic Simulation Model for a Hybrid Solar Water Heating System: M. S. Sodha, A. Kumar, N. K. Bansal and I. C. Goyal 275

Performance of Ejector Heat Pumps: F. C. Chen and C-T. Hsu 289

Stochastic Approach in the Optimization of a Nuclear Power System: I. Ursu, M. Pavelescu and M. Tuturici 301

SHORT COMMUNICATION

Energy Implications for Saskatchewan Farms: B. Lara and F. Curtis 311

Issue No. 3 JULY–SEPTEMBER

The Passive Solar Heated School in Wallasey. VII: Window Opening Behaviour and the Microclimate of a Classroom: M. G. Davies and A. D. M. Davies 315

Heat Pump Assisted Distillation. VI: Classified References for Heat Pump Assisted Distillation Systems from 1945 to February 1986: R. Jaganathan, S. Dodda, S. Supranto, P. J. Diggory and F. A. Holland 327

Solar Crop Drying in a Low Humidity Environment: O. O. Mojola 333

Thermal Characteristics and Performance of Salt Gradient Solar Ponds: R. S. Beniwal, R. Singh and P. V. Bakore 343

Laminar Boundary-layer Analysis of Simultaneous Mass and Heat Transfer in Natural Convection Around a Horizontal Cylinder: M. Hasan and A. S. Mujumdar 359

Strategy for the Expansion of an Existing Steam Rankine Cycle to a Combined Cycle: C.-C. Chou and Y.-S. Shih 373

On the Viability of a Gas-to-gasoline Industry in Australia: A. R. Del Musgrove . . . 385

Optimization of Metal-based Multilayers for Transparent Heat Mirrors: E. Valkonen and B. Karlsson 397

A Solar Test Collector for Evaluation of Both Selective and Non-selective Absorbers: C. M. Lampert 405

SHORT COMMUNICATIONS

Mass Transfer and Free Convection Flow Through a Porous Medium: A. Raptis and C. Perdikis 423

Spouted Bed Combustion of Paddy Husk: S. C. Bhattacharya and N. Shah 429

Issue No. 4 OCTOBER–DECEMBER

The Passive Solar Heated School in Wallasey, VIII: A Study of the Lighting: D. J. Carter 433

Heat Pump Assisted Distillation. VII: A Feasibility Study on Heat Transformer Assisted Distillation Systems: M. A. R. Eisa, R. Best, P. J. Diggory and F. A. Holland 445

Evaluation of SRK Equation of State in Calculating the Thermophysical Properties of Gas Turbine Combustion Gases: Y. S. H. Najjar and A. R. Mansour 459

An Optimum Performance of Flat-type Solar Air Heater with Porous Absorber: M. A. Hassab, M. M. Sorour and F. Elewa 479

A Computer-aided Planning (CAP) System for the Gas Engine Co-generation Plant: S. Horii, K. Ito and Y. Suzuki 491

Optimal Planning of Gas Turbine Co-generation Plants Bases on Mixed-integer Linear Programming: S. Horii, K., Ito, P. S. Pak and Y. Suzuki 507

Chemical Heat Pump using Heat of Reversible Catalytic Reactions: G. Cacciola, V. Anikeev, V. Recupero, V. Kirillov and V. Parmon 519

The Response of a Greenhouse to Climate Features as a Tool to its Equipment Design: C. Kittas 531

Analysis of Cumulative Exergy Consumption: J. Szargut 541

Catalyst-assisted Chemical Heat Pump with Reaction Couple of Acetone Hydrogenation/2-Propanol Dehydrogenation for Upgrading Low-level Thermal Energy: Proposal and Evaluation: Y. Saito, H. Kameyama and K. Yoshida 549

Thermodynamic and Economic Evaluation of a Solar-assisted Heat Pump: M. Tu . . . 559

Potential of Ground Heat Source Systems: O. J. Svec 573

Short-term Thermal Energy Storage as a Means of Reducing the Heat Pump Capacity Required for Domestic Central Heating Systems: T. R. Buick, P. W. O'Callaghan and S. D. Probert 583

SHORT COMMUNICATIONS

Subsistence Electricity Renewable Energies and Development: N. J. D. Lucas . . . 593

Finite-difference Solution of Heat Transfer in Developing Flow in an Annulus of Two Rotating Cylinders: V. M. Soundalgekar and P. R. L. Sarma 599

The Effect of Automobile Weight on Gasoline Costs: F. A. Curtis and D. Kinnard . . 609

An Experimental Study on a Modified Design Compact Shallow Solar Pond: H. M. Ali 613

Book Review 617

Author Index 619

Keyword Index 619

Volume Contents iii